NS protein produce an immune response in humans

Part of JE3 reference Ferrari C + evidence that a DNA Vaccine will induce an immune response

T-cell response to structural and nonstructural hepatitis C virus antigens in persistent and self-limited hepatitis C virus infections.

Ferrari C, Valli A, Galati L, Penna A, Scaccaglia P, Giuberti T, Schianchi C, Missale G, Marin MG, Fiaccadori F

Cattedra Malattie Infettive, Universita di Parma, Italy.

Twenty-nine patients with chronic hepatitis C and 15 asymptomatic hepatitis C virus antibody-positive subjects who clinically recovered from hepatitis C virus infection were studied for their peripheral blood lymphomononuclear cell proliferative response to hepatitis C virus structural and nonstructural antigens (core, envelope, nonstructural 4 and nonstructural 5) expressed in yeast as superoxide dismutase fusion proteins, in an initial attempt to define some of the features of the virus-specific immune response. Hepatitis C virus core was the most immunogenic antigen for human leukocyte antigen class II-restricted T cells in both groups of patients studied, and the proliferative response to it was the most vigorous and the most frequently expressed in comparison with the other antigens tested. The specificity of the results was supported by the lack of response to hepatitis C virus antigens by healthy uninfected controls and confirmed by recognition of recombinant core proteins of different origin (yeast and baculovirus) by polyclonal T-cell lines produced by T-cell stimulation with yeast-derived core. Each of the antigens tested was able to induce significant although variable levels of proliferative response, indicating that all can be immunogenic at the T-cell level. Significant proliferative responses to core, nonstructural 4 and nonstructural 5 antigens were more frequently detected in subjects who were able to eradicate infection than in patients with chronic hepatitis C, although the difference was statistically not significant. No difference was observed between the two groups of patients with respect to the response to the putative envelope antigens.

PMID: 8294086, UI: 94124107